



# Ø BEAT



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MEETING NOTICE: The Pikes Peak Radio Amateur Association will meet this month on April 13 at 7:30 pm in the Security Savings and Loan Building, at East Platte and Union Blvd. Any person interested in amateur radio is invited to attend. Ray Uberecken WØWYZ will be bringing us a program on transmission lines, antennas, and all related stuff. Next to his mother and his receiver, a ham's best friend is his antenna system. But it's also probably the most mis-talked about area in radio. So come, and bring a problem and/or a friend, whichever is easier to find. (Also, see article below...)

IF YOU CLUTCH at taking exams--If the doc says they're too hard on the ol' pumper--Or if you'd like to continue thinking you know more than you really do, then turn the page, because Ray Uberecken WØWYZ is at it again.

Here is a test on SWR, transmission lines and antennas. Answer the questions and bring the Zero Beat to the April club meeting to see how you've done.

1. A 135-foot center-fed dipole will work on:
  - a. 160 meters
  - b. 80 meters
  - c. 40 meters
  - d. 20 meters
  - e. 15 meters
  - f. 11 meters
  - g. 10 meters
  - h. 6 meters
  - i. all of the above
  - j. none of the above
2. With a SWR of 3:1 and a transmitter power output of 40 watts, the radiated power from the antenna (using a lossless transmission line) will be 30 watts. TRUE or FALSE
3. A SWR greater than 2:1 puts enough reflected power into the transmitter to cause possible damage to the final amplifier. T or F
4. The SWR should be read at the antenna or at half-wave intervals from the antenna to be accurate. T or F
5. A balun on your 80 to 10 meter dipole antenna can improve the SWR by nearly 2:1 at the band edges. T or F.
6. You should not operate on 80 meter dipole cut for 3.7 MHz any further than 100 kHz on either side. T or F.
7. The lower the SWR the higher the effective radiated power by the antenna. T or F

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The PPRAA meets at 7:30 pm on the second Wednesday of each month in the Security Savings and Loan Building, East Platte at Union Blvd.

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8. A transmatch (antenna tuner) can lower the SWR in the line between the transmatch and the antenna to a SWR less than 2:1 without need to prune the line length. T or F
9. A high SWR will cause the feed line to radiate a considerable amount of power, possibly more than the antenna. T or F
10. My (meaning your) understanding of SWR is very good and all my SWR readings, power readings, transmission lines and antennas work perfectly and understandably. T or F

If the answer to number 10 is false or maybe not quite true, then take some readings of a problem area you have and bring them to the April meeting. We'll try to discuss a few of them.

Ray WØWYZ

MARCH MINUTES: The meeting was opened by Lyle Rockefeller WBØMDI, Vice-president, at 7:37. Introductions were made, with a big crowd present, and minutes from February were approved. The Treasurer's report from Dick Schlueter WBØPNX was \$313.12 at the end of February. Official results of the swap were--Cake sale \$82, Raffle \$186.46 (with special thanks to AES, D&M and Walkers), Auction \$17, and Food \$53.84, for a total of \$339.30. All those who organized it said the best part for them was the way folks were always there to help out. The TVI Committee announced it (Lou Preller WØPCZ and Ray Uberecken WØWYZ) will also be handling power line noise problems. The break came at 8:05 and the program on space antenna design and exploration included a film about how exploration takes place on a planet as far away as Mars. [Wonder how a turnstile over a slotted cone would work on HF.]

Dave Allen WBØTAQ, Secretary

CODE PRACTICE continues except the nights I forget. Wednesdays (except club meeting nights) and Fridays, 21.160 MHz, 9 pm (moved up half an hour), at 10, 13, 15, 18, and 20 wpm. I'll send 25 at the end too if anyone wants it.

Dave WBØTAQ

## LETTER RECEIVED VIA WØPT:

Dear Members of the SERVCOMM Radio Net of Colorado Springs--We wish to thank all of you for your wonderful, unceasing efforts during the rescue of Mert, WØOXR, during that snowstorm of March 10-12.

Thank you, for the phone calls and all of your concern for our welfare. We will always be grateful to you. It is people like you who make this world a wonderful place to live.


Mert & Lois Jackson  
March 28, 1977

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FOR OUR UN-LOCAL READERS I'd like to print something of our activities in the March 10-12 snowstorm to go along with the letters we received on the subject. Not having a complete, final article, here are some excerpts from the Rocky Mountain News, Denver, Saturday, March 12, 1977.

Amateur radio operators along the eastern slope answered a call for help when they learned authorities were having trouble establishing radio communications during blizzard rescue operations Thursday in the Colorado Springs area.

Helping to sustain many hams who have manned their receivers for more than 43 hours (as of 9:15 pm Friday) was a "May Day" call from one of their own--Merton Jackson of Peyton.

Jackson was heard on the air about 2:15 pm Thursday saying, "This is WØOXR. I am stranded in my car on (El Paso County) Road 110 about three-quarters of a mile west of Eastonville Road." His location is about 18 miles from Colorado Springs.

Bart Bartol [our own WØPT], a Colorado Springs ham who is a member of Servo Comm (sic), which has long-range repeater capabilities, said Jackson told his fellow ham operators he could see three other cars stalled near him.

"The sheriff's office came to us and asked for help," Bartol said.. "They were having some trouble keeping radio communications, especially when some of their vehicles got stuck themselves.

"Since we have repeater capabilities which greatly increases our power output, we called for hams to volunteer to go out with the rescuers and maintain radio communications. We have 12 or 13 hams out there in the rescue vehicles now."

[Many of the rescue vehicles were Army tracked vehicles. And Mert was finally reached Friday night after that paper went to print. This is just, as I say, a short glimpse of what went on. It amounted to a lot of net control stations, liaison with the sheriff's Search and Rescue Team, and riding around in human ice-boxes to get to a lot of folks who were stranded and/or needed medical and other supplies.]

TAQI

THE MAY BOARD MEETING will be at my place WBØTAQ, 821 N. Cascade, on the 2nd. You don't have to be a board member to attend.

LETTER TO ALL MEMBERS OF THE PIKES PEAK FM ASSOCIATION:

I am writing this letter at the request of the members of the Commerce City Radio Club and the members of the WRØALS repeater group.

We as individuals and as a group wish to congratulate your club for the excellent conduct your organization displayed during the recent severe blizzard in your area.

In our group we have Picon Award winners as well as others who have taken part in emergency operations. All of us agree we have never heard an emergency communications network handled any better and with as little interference as your operation. The organizers of the operation are to be commended as well as the net controls, the operators in the field and those stations who listened but refrained from transmitting unless called.

Your operation made us all proud to be called HAMS.

Sincerely,

Howard S. Eldridge KØDCW

Secretary, Commerce City Radio Club

HELLO FROM THE PIKES PEAK FM ASSOCIATION:

I hope that all of you have recovered from your chilling experiences during the recent blizzard. I am delighted that so many of you could turn out and that you did such a good job with communications and that you were able to help those that needed help. It seems that SERVCOMM was organized in the nick of time.

The one above, and the great staff of technicians that work long and hard to keep our repeaters on the air, give us an additional cause to count our blessings. With the lightning season fast approaching, we hope that we will continue to be lucky and that our system does not suffer from that force of nature.


Thank all of you for your continued support and help. The Pikes Peak FM Association meets each Sunday night on 37/97 at 7:00 pm local time. We will be listening for your check in. Best of 73s.

Pete Demario KØUDG, PPFMA

CLASS NEWS: Eleven novice writtens have been taken and sent in from this winter's novice class, so we should be hearing some WDØ calls shortly. Novice classes have ended, but I already have half a dozen folks waiting for them to begin again. This class will be at my place--821 N. Cascade at 7:00 pm, and our first meeting will be on April 25. Anyone from the winter class is also welcome for help studying for the test and for taking the novice written here.

The upgrading class will continue to meet through this month and then break for a while. They will be finishing up with a review of test-type questions. The class is studying a different topic each night, so if you like, come to any session you are able to. You don't need to attend them all to get something out of them.

Ray Uberecken, who teaches the upgrading class, is sounding like it would be nice to have some help when they start up again. If you feel so inclined, contact him or me. Consider teaching just one or two class sessions on one particular topic. So many of us have something we could contribute to the classes.



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THE BOARD MET April 4th at Dean Jaynes WAØPJH's. We decided to put the \$100 that CCARC is giving back to the club into the treasury, and to reserve it for SERVCOMM expenses. All or any part of it can be spent for SERVCOMM needs at the ok of any two board members. The club needs a PR person. Lyle WBØMDI, being employed by the media, is in a very awkward position to be our PR person. It was announced that Chic Cotterell WØSIN, ARRL Rocky Mountain Division Director, has been appointed to the Colorado state wide Search and Rescue Council. We are looking at August 14 as a date for the picnic/swap fest at the Air Force Academy. GI haircuts not required. [They let me on no problem.] So get psyched.

Tentative schedule for club programs: May--Bob Erdmann WØNGA returns for Microprocessors II; June--tour of KRDO with host Lyle Rockefeller WBØMDI; and July--Bob again with III and final Microprocessors. Next board meeting (May 2) will be at my TAQI place so come if ya wanna.

Good news: We straightened ourselves out a bit about membership dues. Subscription membership (same as Associate)--\$4. Novice--\$4, includes voting privileges. Regular \$6, and additional family members living under same roof and fighting over same copy of Zero Beat--\$2 each. [Confidentially, I think Treasurer Dick WBØPNZ was getting a bit scared with daughter Kim WBØUW already on the books, wife Lorna's novice on the way, and daughter Sue hot on the trail of the code.] So if you've already over-paid, you can either corner Dick for your money back or maybe even donate it to the club. Such a choice. And the board said I could go as many pages as I wanted to this issue since there's so much neat stuff to put in, so please don't pull your hair out yet, Ed Pompea.

Dave Allen WBØTAQ

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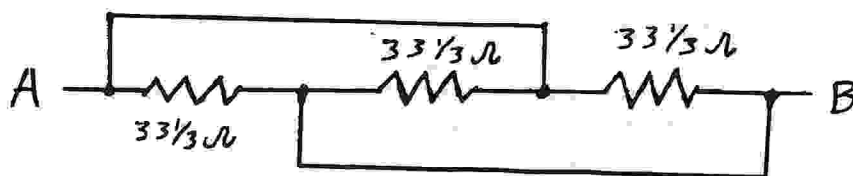
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PUZZLE FOR APRIL\*

What is the resistance between points A and B?

\*The board members have agreed to help me out with some contributions of this sort. I wouldn't want anyone to think you had to be a board member to do so, however. Answers at the club meeting, and in the next Zero Beat if I remember.

HINTS AND HELPS: Transmission Line "Hangers" \*\*

Are your transmission lines coiled under the operating table, running along the lawn, or drooped over the fence? [No, but do you have any advice on chewing gum and bedposts?] If so and you wish to tidy things up, the following tip may be of use. All you need are some lengths of cord string, a staple gun, and a few minutes.

1. Lay out the lines along the wooden fence, along the operating area wallboard, and perhaps up and underneath the operating table.

2. Cut the number of one-foot lengths of cord string you wish to use to hold up the transmission lines running above ground along the fence, wallboard, or underneath the table.

3. Double over a length of cord string, staple it in the center of the fold to the fence, wallboard, or operating table as desired.

4. Place lines in the cord string loops and tie the strings.

Bart WØPT

[\*\*Again, help me make this a regular column.]

FOR SALE: Yaesu FT-101EX, about 7 months old, D-104 with stand, external speaker, SWR-Field Strength-Modulation meter, key. All for \$700. Jeff Hawkins, 632-7075.

EBC 144 Jr, Synthesized two meter rig, 4 and 20 watts out, covers 142.5-149.5 MHz. \$350. David Blair, 597-6097.

WANTED: Low frequency receiver convering 10 to 500 kHz band. Or RME-90 low frequency converter, National NC-270CS. Cash or trade for SP 600 or ?? Ed KØZPG, 635-7554.

50-foot or higher tower. Dick Cohen K6DBR, 599-5645.

I need a general coverage receiver 1950 vintage or later. Will trade or buy. Ray WØWYZ, 471-7134.

ATV REPORT: Starting with this issue, I shall try to submit a monthly article to Zero Beat concerning activities on ATV in the local area.

At this time there are three of us with transceive capabilities: Ray WØWYZ, Myron WA8GUB, and myself. I just finished converting a TV set for Jack WBØRWC, who is in the process of putting a transmitter on the air. We hope to see our group grow so that we can justify building an inexpensive homebrew repeater for ATV purposes. (Continued on next page.)

ATV con'd:

For those of you interested, I highly recommend acquiring the ARRL publication Specialized Communications Techniques. Practically all the information that you need to build a station is contained there. For those who aren't sure, how about a simple conversion to the UHF tuner on your black and white or color portable? None of us are affluent to have color equipment, so b&w is just fine. Keep in mind that the ATV conversion in no way affects the VHF broadcast receiving ability of the set. Since we don't have UHF broadcast here anyway, what have you got to lose? If you don't want to mess with the TV yourself, bring it to me with the following parts and I shall do it for you free of charge: 3 miniature trim caps 3-9pf or smaller, 1 RCA phono jack and 1 plug, and 1 BNC chassis mount female connector.

One thing that will be necessary for good reception is a rotatable horizontal beam for 430 MHz. I use a Cushcraft DX-420 with good results. Also the Cushcraft A-430-11 or A-430-6 are good choices. All are inexpensive. Homebrew your own antenna if you wish. There are a couple of good designs in the ARRL Antenna Book. Do not buy an omni vertical or a beam cut for 440-450 MHz as it will not work well due to our operation being mainly on 427. If you would like more information or an actual demonstration, please call me at 597-6487.

Chas WBØOCJ

FCC TID BITS: From March 4 HR Report--No new amateur secondary station licenses are being issued effective immediately and the FCC is proposing abolition of all except individual primary station licenses. This results in part from the recent landslide of amateur applications and the priority that the FCC has placed on handling new license applications.

A very strong pro-amateur radio statement from FCC Chairman Dick Wiley accompanied the release of the Commission's proposals for banning 10-meter linears and type acceptance of amateur gear. High points of Wiley's comments:

"While I concur in the Commission's proposals to ban use of linear amplifiers in the 11-meter citizen's radio band and to require type acceptance of amateur equipment, I must admit to doing so with some reservations... My concern is that, in attempting to deal with the rapidly proliferating and sometimes troublesome CB service, we may appear to be penalizing the amateur community which, in my judgment, is one of the most professional and self-regulated services within the Commission's jurisdiction..."

Harmonic and spurious emissions from all amateur transmitters will be specifically limited by a first Report and Order on Docket 20777, the bandwidth docket. The new limits are 40 dB below carrier level under 30 MHz and 60 dB down between 30 and 235 MHz, and apply to all amateur equipment homebrew and modified as well as commercial. Effective date should be late April.

From March 11 issue--Another RFI bill that would require manufacturers to build better front ends and RFI suppression into their TV sets and hi-fi gear has just been introduced in the Senate by Barry Goldwater K7UGA. His bill--S-864--is similar to his effort in the last Congress and reportedly will be paralleled in the House by a similar measure from Representative Vanik of Ohio. ...It's the RFI problem that provided the impetus for the FCC's ban on 10-meter linears, and unless home entertainment equipment is made less susceptible to RFI the outlook is for more and more repressive rules and legislation... (continued on next page)

FCC con'd:

The FCC has changed Part 97.95 (a)(2) so you don't have to report a permanent change in location within four months, as before.

And under Docket 21135, all secondary station licenses now issued would be good until they expire and couldn't be renewed, and no further secondary licenses would be issued. Comments are due June 2.

from HR Report

THIS SPACE FOR DOODLING (As for me, I'm going to hit the hay. Hope to see you all at the club meeting.)

73 all  
Dave tape



# Ø BEAT

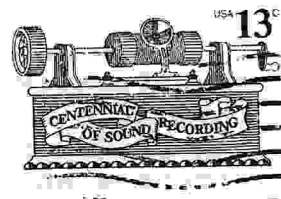


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